What is claimed is:

1. A parallel and selective growth method of carbon nanotube on the substrates for electronic-spintronic device applications comprising the steps of:

forming an insulating film on a board;

forming fine patterns of catalyst metal layer including a contact electrode pad on the insulating film;

forming a growth barrier layer for vertical growth on upper part of the catalyst metal layer; and

directly growing a carbon nanotube between the catalyst patterns.

2. The method according to claim 1, wherein the insulating film is formed by using an oxidation method and CVD (Chemical Vapor Deposition) method in an electric furnace of 1100°C.

3. The method according to claim 1, wherein the insulating film is formed to have thickness of 50~500nm.

4. The method according to claim 1, wherein the catalyst metal uses at least one among Ni, Ni/Ti (or Nb), Co, Co/Ti (or Nb), Fe, Fe/Ti (or Nb), (Ni/Co)n, (Co/Ni)n, and (Co/Ni/Co)n, (Ni/Co/Ni)n (n=1, 2, 3,...), and Co/MgO.

5. The method according to claim 1, wherein the catalyst metal has a purity higher than 3N, and is formed to have 80~400nm thickness in the temperature range of normal temperature~150°C.

6. The method according to claim 1, wherein the CNT is grown in C_2H_2 (or $C_2H_4)/N_2(He,Ar),H_2,NH_3$ atmosphere with 10~5000torr of gas pressure for 10~3000 seconds.

7. The method according to claim 1, wherein the CNT is grown using a thermochemistry gas phase deposition process (or a plasma process), and the temperature of a processing room is to be 500~900°C (error range ±10°C at both ends).

8. The method according to claim 1, wherein the CNT growth uses an amorphous carbon thin film and a graphite as a self-catalyst, and the growth speed is 100nm/minute.

9. The method according to claim 1, wherein a clearance between the catalyst metal patterns is within 50nm~10μm.

10. The method according to claim 1, wherein a diameter of the CNT is within 1~50nm.

11. The method according to claim 1, wherein the contact electrode uses normal metals, superconductive metals, and magnetic metals.

12. The method according to claim 1, wherein one among an oxide film, a nitrogen film, a laminated structure of the oxide film and the nitrogen film, a

mixture structure of the oxide film and the nitrogen film, or SiO_2, Si_3N_4, $SiO_2 - Si_3N_4$, Al_2O_3 is used as the growth barrier layer for vertical growth

13. The method according to claim 1, wherein as the growth barrier layer for vertical growth, metals such as Ti, Pt, W, Nb, V, Au or a compound metal of above metals is used.

14. The method according to claim 12, wherein thickness of the growth barrier layer is varied within 20~30nm in order to embody a top gate device.

15. The method according to claim 13, wherein the growth barrier layer is used as an electrode for eletronic- and spintronic devices.